

REMARKS

An Office Action was transmitted June 15, 2009 in the above-referenced application in which claims 1-24, 32 and 33 were examined, the Examiner contending that the claimed invention is not disclosed in priority U.S. Serial Nos. 10/199,139, 09/957,829 and 60/234,841 and none of the pending claims are deemed to receive benefit of these prior filed applications. Claims 14, 21, and 23 are objected to for informalities. Claims 11, 16, 19, 21 and 30 are rejected under 35 U.S.C. § 112, 2nd paragraph as indefinite. Claims 24, 32 and 33 are rejected under 35 U.S.C. § 102(e) as anticipated by or under 35 U.S.C. § 103(a) as obvious over *Koblish et al.* (U.S. Publication No. 2003/0138473 A-1).

Claims 5, 11, 14, 16, 18-21, 23, 24 and 32 are amended herein, with no new matter added thereby. Claims 28-30 are cancelled. Reconsideration and withdrawal of the outstanding rejections and objections are respectfully requested in view of the above amendments and remarks which follow.

A. Formality Objections are Addressed.

The formality objections to claims 14, 21 and 23 are respectfully traversed. Claim 14 is amended as suggested by the Examiner, to recite "having" instead of "has". Claim 21 is amended to clarify three steps by first reciting "removing said compressed reactant mixture", then reciting "removing said compressed second reactant mixture", and then reciting "wherein the composition of said second reactant mixture and/or said second compressing step result in said second material laying having a second pore size." Other clarity issues addressed, with claims 5, 18 and 20 amended to replace the reference to step (e) with language used claim 1. Similarly, claims 16 and 19 are amended to recite "the heating step" instead of "step (d)". Withdrawal of the objections is respectfully requested.

B. 35 U.S.C. § 112 Rejection of Claims 11, 16, 19, 21 and 30 is Addressed.

The rejection of claims 11, 16, 19, 21 and 30 under 35 U.S.C. § 112, 2nd paragraph is addressed by the following amendments:

- Claim 11 is amended to proper Markush form.
- Claims 16 and 19 now recite "said formed reactant mixture", which has sufficient antecedent basis in claim 1.

- Claim 21 has been amended as described above under section B, to recite “compressed second reactant mixture” and “second compressing step”.

The rejection of claim 30 as reciting “said alpha” without sufficient antecedent basis is respectfully traversed. Claim 30 depends from claim 24 which depends from claim 1 which recites “a mixture of alpha and beta tricalcium phosphate”.

All indefiniteness having been addressed, withdrawal of the 35 U.S.C. § 112, 2nd paragraph rejection is respectfully requested.

C. Rejections Under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a) of Claims 24, 32 and 33 are Addressed.

The rejection of claims 24, 32 and 33 under 35 U.S.C. § 102(e) as anticipated by or under 35 U.S.C. § 103(a) as obvious over *Koblish et al.* is respectfully traversed.

Claim 24 stands rejected as the product-by-process of claim 1. Claim 24 has been amended to recite that the “porous tricalcium phosphate net-shaped material [is] produced by the method of claim 15.” Claim 15 requires that the net-shaped tricalcium phosphate material have a “non-uniform porosity” which is “functionally graded”. *Koblish* fails to teach such “functionally graded” tricalcium phosphate net-shaped materials” or how to make such a product. Instead, claim 1 of *Koblish* requires that the second segment “comprising calcium phosphate hav[e] substantially uniform macro-, meso- and microporosity”. Claim 9 of *Koblish* similarly recites an “inorganic material having substantially uniform macro-, meso- and microporosity”. Thus it cannot be said that the claimed product is the same as, or merely an obvious variant of the products produced by the *Koblish* methodologies. In the absence of a teaching relating to the claimed functional porosity gradient, claim 24 is patentably distinguishable over *Koblish*.

Claim 32 stands rejected as an obvious product or the same product as described in *Koblish*. It should be noted, however, that allowed claim 22 of the present case is directed towards a process of forming a porous tricalcium phosphate net-shaped material having two or more layers of different porosities. See also [0062] of the instant application. Claim 32, therefore, is directed towards a product having two or more layers of different porosities. *Koblish* fails to teach or suggest such a product. In contrast, *Koblish* discloses forming calcium phosphate having substantially uniform macro-, meso- and microporosity.

See e.g., claim 1 of *Koblisch*. Since present claim 32 requires two or more layers of different porosities made by the process of claim 22, the resultant product is clearly structurally different than the *Koblisch* products. Accordingly, claims 32 is patentably distinguishable over *Koblisch*.

Claim 33 has been amended to recite that the net-shaped material comprising alpha and beta tricalcium phosphate "has a non-uniform functionally graded porosity". For the reasons given above relative to product-by-process claim 24, claim 33 is non-obvious over *Koblisch*

Since each of the products of claims 24, 32 and 33 are non-obvious over the products taught by *Koblisch*, withdrawal of the rejection of claims 24, 32 and 33 is respectfully requested.

D. Rejoinder of Claims 25, 26, 27 and 31 is Requested.

Each of nonelected claims 25, 26, 27 and 31 depend from claim 24, and are believed allowable as reciting the product-by-process of claim 24 described above as neither taught nor rendered obvious by *Koblisch*. Rejoinder of claims 25, 26, 27 and 31 would not impose a serious burden on the Examiner, in view of the dependency of these claims. Accordingly, rejoinder and allowance of claims 25, 26, 27 and 31 is respectfully requested.

E. Conclusion and Petition for 3-Month Extension.

Claims 1-27 and 31-33 being in form for allowance, such action is respectfully requested. Should any issues remain regarding this application, the Examiner is kindly asked to telephone the undersigned.

The Applicant hereby petitions for a 3-month extension for response. Please charge Deposit Account No. 50-1123 the small entity extension fee and any other fees associated with this filing.

Respectfully submitted,

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